(a) contacting said test sample taken from a patient with at least one reagent polynucleotide [comprising at least about 10 nucleotides that (i) specifically bind, and (ii) have at least 90% identity] wherein said reagent polynucleotide has at least 50% identity with a polynucleotide selected from the group consisting of SEQUENCE ID NO 1; SEQUENCE ID NO 2; SEQUENCE ID NO 3; base pair position 14-482 of SEQUENCE ID NO 4; [SEQUENCE ID NO 5;] and fragments or complements thereof; [and]

(b) detecting the presence of said target polynucleotide [indicative of breast disease] in [the] said test sample; and

(c) correlating the presence of said target polynucleotide with the presence of breast disease in said patient.

3. (Twice amended) A method for diagnosing breast disease in a patient by detecting mRNA of a target polynucleotide [indicative of breast disease] in a test sample taken from a patient, comprising:

(a) obtaining a test sample from a patient;

[(a)] (b) performing reverse transcription with at least one primer in order to produce cDNA;

[(b)] (c) amplifying the cDNA obtained from step [(a)] (b) to obtain an amplicon, said amplifying using sense and antisense primers wherein each primer [comprises at least abou 10 nucleotides that (i) specifically bind, and (ii) have] has at least [90%] 50% identity with a polynucleotide selected from the group consisting of SEQUENCE ID NO 1; SEQUENCE ID NO 2; SEQUENCE ID NO 3; base pair position 14-482 of SEQUENCE ID NO 4; [SEQUENCE ID NO 5;] and fragments or complements thereof; and

[(c)] (d) detecting the presence of said amplicon in the test sample, wehrein the presence of the amplicon indicates detection of the target polynucleotide indicative of breast disease in [the test sample] said patient.

6. (Twice amended) A method of diagnosing breast disease in a patient by detecting a target polynucleotide [indicative of breast disease] in a patient test sample suspected of containing said target polynucleotide, comprising:

(a) contacting said test sample with at least one sense primer and at least one anti-sense primer wherein each primer [comprises at least about 10 nucleotides that (i)

specifically bind, and (ii) have] has at lest [90%] 50% identity with a polynucleotide selected from the group consisting of SEQUENCE ID NO 1; SEQUENCE ID NO 2; SEQUENCE ID NO 3; base pair position 14-482 of SEQUENCE ID NO 4; [SEQUENCE ID NO 5;] and fragments and complements thereof, and amplifying to obtain a first stage reaction product;

(b) contacting said first stage reaction product with at least one oligonucleotide probe to obtain a second stage reaction product, with the proviso that the oligonucleotide probe is (i) located 3' to the sense and antisense primers utilized in step (a), and (ii) complementary to said first stage reaction product, wherein the probe [comprises at least about 10 nucleotides that (i) specifically bind, and (ii) have] has at least [90%] 50% identity with a polynucleotide selected from the group consisting of SEQUENCE ID NO 1; SEQUENCE ID NO 2; SEQUENCE ID NO 3; base pair position 14-482 of SEQUENCE ID NO 4; [SEQUENCE ID NO 5;] and fragments or complements thereof; and

(c) detecting said second stage reaction product as an indication of the presence of the target polynucleotide [indicative of breast disease in the test sample] and correlating this presence with the presence of breast disase in said patient.

10. (Twice amended) A test kit useful for detecting a target polynucleotide indicative of breast disease in a test sample, said test kit comprising a container containing at least one reagent polynucleotide [comprising at least about 10 nucleotides that (i) specifically bind, and (ii) have] wherein said polynculeotide has at least 90% identity with a polynucleotide selected from the group consisting of SEQUENCE ID NO 1; SEQUENCE ID NO 2; SEQUENCE ID NO 3; base pair position 14-482 of SEQUENCE ID NO 4; [SEQUENCE ID NO 5;] and complements thereof.

11. (Twice amended) A purified polynucleotide comprising a polynucleotide [having at least about 10 nucleotides that (i) specifically bind, and (ii) have] which has at least 90% identity with a polynucleotide selected from the group consisting of SEQUENCE ID NO 1; SEQUENCE ID NO 3; and complements thereof.

33. (Twice amended) A composition of matter comprising a polynucleotide, wherein said polynucleotide has at least [about 10 nucleotides that (i) specifically bind,

and (ii) have at least] 90% identity with a polynucleotide selected from the group consisting of SEQUENCE ID NO 1; SEQUENCE ID NO 3, and complements thereof.

Please add new claim 49 as follows:

49. A method of detecting the presence of breast disease in a patient by detecting a target polynucleotide in a patient test sample, comprising:

(a) contacting said test sample taken from a patient with at least one reagent polynucleotide wherein said reagent polynucleotide has at least 50% identity with a polynucleotide selected from the group consisting of SEQUENCE ID NO 4; and SEQUENCE ID NO 5; and fragments or complements thereof;

(b) detecting the presence of said target polynucleotide in said test sample; and

(c) correlating the presence of said target polynucleotide with the presence of breast disease in said patient.

REMARKS

Claims 11-16, 33, 38, 39 and 43-48 are rejected under 35 U.S.C. § 102(b) as being anticipated by Adams, *et al.* (GenBank Accession No. AA340069, from Nature 377(6547 Suppl.) 3-174 (1995)) and by Hillier, *et al.* (Accession No. R75793, 1995). The Examiner sates that Adams, *et al.* teach a 229 base pair expressed tag sequence (EST), i.e. a polynucleotide, which is about 90% identical to SEQ ID NOS 1-5 of this application isolated from a human breast cDNA library.

Applicant previously asserted that the date of entry of the Adams, *et al.* sequence was 21 April 1997 making this reference a reference under 35 U.S.C. § 102(a) rather than 102(b) and that the present application claimed priority to application 08/742,067, filed 31 October 1996 which taught a sequence which was the same as nucleotides 14-428 of SEQ ID NO. 4, while the Adams, *et al.* reference spans nucleotides 18-311 of SEQ ID NO. 4. The Applicant's response concluded, therefore, that Adams, *et al.* is not prior art against this application.

The Examiner disagrees stating that the sequence Adams, *et al.* has a publication date of 1995 because this 294 nucleotide sequence of Adams, *et al.* was published in